

Application S/N 10/511478
Response to Office Action Dated 10/09/2008

REMARKS

Favorable reconsideration of this application is requested in view of the above amendments and the following remarks. Applicants correct typographical errors in the specification and amend claims 1 and 8. Applicants have not added new matter; support in the specification for the grip portion, the reserve tank, the communication of the charged sound propagation fluid between the sound window and the reserve tank and the insertion portion is given on page 5, lines 23-29, and page 6, lines 24-37 5, lines 4-6. Claims 1 and 3-8 are pending. Claim 2 has been cancelled without prejudice or disclaimer.

Statement of Substance of Interview

A telephonic interview was conducted on January 7, 2009 with Applicants' attorney, Karuna Ojanen, Reg. No. 32484, Examiner Crystal Leach and supervisory Examiner Long Lee. The obviousness rejection of claim 1 over Crowley '825 in view of Abe '673 was discussed. Applicants asserted out that Abe '673 was an endoscope, an optical instrument, and one of skill in the art would not consider the teachings of an optical instrument when considering improvements to an acoustic device. Applicants further asserted that Crowley '825 did not have a grip portion because it was a catheter. Examiner Leach responded by asserting that Abe '673 was using a barrier layer to prevent against liquid and gas permeation, similar to the purpose for which Applicants was using the barrier layer. Attorney for Applicants countered that Abe '673 used the barrier layer to protect against deterioration of the endoscope during sterilization using hydrogen peroxide, not to maintain pressure in the sound window, as claimed by Applicants. Attorney for Applicants further maintained that neither Crowley '825 nor Abe '673 maintained pressure in the sound window and that this was accomplished using the barrier layer and the reserve tank. The participants discussed affirmatively claiming a pressurized sound window and including the structure that maintains the pressure. The Examiners responded that they would review the Abe '673 and the Crowley '825 references again but it appeared that neither disclosed maintaining the pressure in the sound window. The Examiners indicated that another search would also be conducted. No agreement was reached.

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The rejections under 35 U.S.C. §103(a)

Applicants traverse the rejection of claims 1, 3-5 as being obvious over a combination of Crowley '825 in view of Abe '673, and claims 6 and 7 in further view of Law '853 and claim 8 in further view of Verdonk '961. As explained below, it would not be obvious to combine Crowley '825 with Abe '673 to achieve a ultrasonic probe having a pressurized sound window and an elastic reserve tank, the sound window having a barrier layer, and that the elastic reserve tank absorbs changes of pressure of the charged sound propagation liquid in the sound window to maintain the pressure and shape of the sound window, as now required by claim 1.

Crowley '825 teaches an acoustic imaging balloon catheter designed to withstand varying pressures of a balloon catheter. Crowley '825 specifically teaches a dome element having an ultrasonic transducer within a catheter sheath adapted to be filled with lubricating and sound-transmitting fluid (column 11, lines 35-40) and to be subject to varying pressures. Crowley '825 does not teach the use of a barrier layer to maintain pressure inside a sound window; Crowley '825 also does not teach a reserve tank that absorbs changes of pressure of the charged sound propagation fluid, such as 100 psi (column 17, line 64) in order to expand the balloon of the catheter in vivo.

Abe '673, as an optical instrument, certainly does not teach or suggest an ultrasonic probe having a pressurized sound window and an elastic reserve tank, the sound window having a barrier layer on its surface, such that the elastic reserve tank absorbs changes of pressure of the charged sound propagation liquid in the sound window to maintain the pressure and shape of the sound window. Abe '673 does not teach a reserve tank in communication with the sound window to absorb pressure and thereby maintain a pressure inside a sound window, as required by claim 1. Applicants therefore request that the rejection of claim 1 as being obvious over Crowley '825 and Abe '673 be withdrawn because neither reference teaches the claimed elements of claim 1.

Claims 3-8 are allowable at least by virtue of their dependence upon claim 1.
Applicants do not concede the correctness of the rejection.

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The Examiner is requested to pass the case to issuance. If any further matters remain that can be easily resolved, please telephone the attorney below.

Respectfully submitted,



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By: 

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